

Remarks

Applicants thank the Examiner for the careful examination of this application and the clear explanation of the rejections.

The amended title conform to the claimed matter.

The amended and new claims obviate the rejections under 35 USC 102 and 103. The amended and new claims "particularly point out and distinctly claim the subject matter the applicant regards as his invention."

Amended claim 1 defines a method of selecting a frequency band for use in a desired wireless communication from among a plurality of frequency bands available to be used for the desired wireless communication.

The method produces narrow band measurements of a frequency band by passively monitoring the plurality of frequency bands.

The method sums the narrow band measurements of the frequency band to produce a signal quality indication.

The method selects a frequency band for the desired wireless communication in response to the signal quality indication.

In contrast, US 5,907,812 to Berg discloses:

In a technically simplified and preferred embodiment of the method according to the present invention, a plurality of carrier frequency positions is defined within the radio frequency band. The spacing between at least part of adjacent carrier frequency positions is smaller than the communication frequency band.

The radio frequency band is now discretely scanned at these carrier frequency positions and communication is established by positioning the carrier frequency of the communication frequency band at a carrier frequency position corresponding to an idle part of the radio frequency band comprising or covering the communication frequency band of the system. column 4, lines 26-39

Starting with step 1 "START", in step 2 "SCAN" the radio frequency band will be discretely scanned at the carrier frequency positions. At each carrier frequency position, a detection is carried out for the presence of interference, indicated by step 3 "INTERFERENCE DETECTION". With decision step 4 "INTERFERENCE FREE", it is tested whether the particular carrier frequency position is essentially free of interference; i.e. such that a reliable communication could be established over this part of the radio frequency band. If negative "No", scanning has to be proceeded at another carrier frequency position. In the affirmative "Yes", the result of the scan at the particular carrier frequency position will be processed in step 5 "FORM BAND".

In general, in step 5 a concatenation of carrier frequency positions is formed, having the width of the communication frequency bandwidth of the system and which is essentially free of interference.

With decision step 6 "COMMUNICATION BANDWIDTH", it is tested whether the string of carrier frequency positions covers a bandwidth at least equal to the communication frequency band of the system. In the affirmative "Yes", the scan can be stopped, step 7 "STOP SCAN", and communication can be established over part of the radio frequency band determined by the string of carrier frequency position, step 8 "ESTABLISH COMMUNICATION". If negative "No", the scan has to be repeated until an interference free part of the radio frequency band has been detected. The number of scans of the complete radio frequency band can be limited, of course.

It will be understood that a very fine grid of carrier frequency positions allows for a very efficient occupation of the radio frequency band. However, a fine grid can have the disadvantage of unacceptable long access times because of the scanning time involved. To avoid unduly long access times, in particular in cases wherein the chance of finding part of the frequency band essentially free from disturbances is very small,

various levels or thresholds of interference can be defined. These levels may range from no interference or a relatively low level of interference to an increased level of interference at which no transmission at all is possible. These levels of interference can be different for the different systems, dependent on their specific transmission properties. column 9, lines 4-46

The Berg patent thus discloses discreetly scanning individual carrier frequency positions and determining for each position whether interference exists in that carrier frequency position. If no interference exists in that carrier frequency position, the disclosed process attempts to form a frequency band. If interference exists in that carrier frequency position, the disclosed process scans the next position.

Amended claim 1 now requires producing narrow band measurements of a frequency band and summing the measurements for selecting a frequency band.

Amended claim 1 distinguishes over the Berg patent with the limitations of a method of selecting a frequency band for use in a desired wireless communication from among a plurality of frequency bands available to be used for the desired wireless communication, comprising: producing narrow band measurements of a frequency band by passively monitoring the plurality of frequency bands; summing the narrow band measurements of the frequency band to produce a signal quality indication; and selecting a frequency band for the desired wireless communication in response to the signal quality indication.

Claim 1 stands allowable.

Independent claim 13 defines a wireless communication station.

An antenna is used in wireless communications.

A band selection controller is coupled to said antenna. The band selection controller includes a filter producing filtered outputs for narrow bands of a selected channel received from the antenna.

A measurement portion is connected with the filtered outputs to produce measurements of each of the narrow bands.

A selection portion is connected to the measurement portion and selects a frequency band for wireless communication in response to summing the measurements of the narrow bands.

The Berg patent discloses discreetly scanning individual carrier frequency positions and determining for each position whether interference exists in that carrier frequency position. If yes, the disclosed process attempts to form a frequency band. If no, the disclosed process scans the next position.

Amended claim 13 distinguishes over the Berg patent with the limitations of a wireless communication station, comprising: an antenna for use in wireless communications; a band selection controller coupled to said antenna, the band selection controller including: a filter producing filtered outputs for narrow bands of a selected channel received from the antenna; a measurement portion connected with the filtered outputs to produce

measurements of each of the narrow bands, and a selection portion connected to the measurement portion and selecting a frequency band for wireless communication in response to summing the measurements of the narrow bands.

The depending claims also stand allowable as depending from allowable independent claims 1 and 13 and as including, in combination with the limitations of the independent claims, additional distinguishing limitations.

In particular, claims 33-36 require the measurements of the energy in each narrow band and the summing of the measurements of the energy in each narrow band.

The application is in allowable form and the claims distinguish over the cited references. Applicants respectfully request reconsideration or further examination of this application.

Respectfully Submitted,

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